OUR GOALS

North Carolina Cooperative Extension helps strengthen our North Carolina families and communities. Our mission and our work are dedicated to improving the quality of people’s lives. North Carolina Cooperative Extension is focusing its efforts on nine major goals implemented by county field faculty and supported by university-based specialists. Locally, we work with our advisory groups to help us focus in on the goal areas that are most relevant for our organization in our community.

- North Carolina will have profitable, environmentally-sustainable plant, animal and food systems that support thriving communities and provide all North Carolinians access to safe, nutritious food.
- North Carolina’s natural resources and environmental quality will be protected, conserved and enhanced, and ecosystem benefits will be optimized.
- The economic, social and environmental welfare of North Carolinians will be improved through the generation, conservation and use of clean, sustainable, efficient and reliable energy.
- North Carolinians will be prepared for and better able to recover from disasters and other emergencies.
- Adults and children of all ages and abilities will make healthy food choices and be physically active to achieve or maintain a healthy weight and prevent chronic disease.
- North Carolina residents at all stages of life use effective parenting and life skills to create stable, safe and secure environments.
- Youth and adults will achieve educational success through intentional non-formal and formal educational opportunities that expand and enhance skills and knowledge.
- North Carolina will excel in the global marketplace as a result of growing a competitive workforce and a diversified economy.
- North Carolinians will be civically engaged within their communities.

Meet the Watauga County Staff

CURRENTLY VACANT, Watauga County Extension Director. Responsibilities: Administration, Community and Economic Development, Extension & Community Association

EDDY LABUS, Extension Agent, Pesticide Education, Agriculture. Responsibilities: Livestock, Tobacco, Field and Forage Crops

RICHARD BOYLAN, Extension Area Specialized Agent, Agriculture. Responsibilities: Agriculture

MELANIE CASHION, Program Assistant.

Responsibilities: Expanded Food & Nutrition Education Program (EFNEP)

MARGIE MANSURE, Extension Agent, Family & Consumer Sciences. Responsibilities: Family & Consumer Education focusing on Nutrition & Wellness

WENDY PATOPRSTY, Extension Agent, Natural Resources. Responsibilities: Watershed Science Educator for Watauga River Basin

KAREE MACKEY, Extension Agent, 4-H Youth Development. Responsibilities: 4-H and Youth Development

MEGHAN BAKER, Extension Agent, Agriculture. Responsibilities: Christmas Trees, Commercial Horticulture and Consumer Horticulture

KATHY LEE, Extension Secretary. Responsibilities: Family and Consumer Education, 4-H, Community and Economic Development

SUSANNE WINEBARGER, Administrative Secretary. Responsibilities: Administration, Agriculture, Community and Economic Development

OUR MISSION:

“North Carolina Cooperative Extension partners with communities to deliver education and technology that enrich the lives, land and economy of North Carolinians.”

Watauga County Advisory Leadership Council Members

Betsy Anderson, Bryan Belcher, Elaine Brookshire, Cheryl Brown, Jim Buchanan, Jim Bryan, Al Childers, Loana Childers, Lillian Danner, Diane Deal, Dick Hearn, Joan Hearn

Bill Herring, Winston Kinsey, Richard McDonald, Kathleen McFadden, Bill Moretz, Diane Price, Nancy Reigel, Bill Sherwood, Carrie Steury, Scott Suddreth, Marcia Alayon
As you probably know, our County Extension Director, Sue Counts, retired November 1. We are often asked how she is doing. She is enjoying retirement and keeping busy traveling, spending time with family, and serving on the MountainKeepers Board of Directors and the Family and Consumer Science Foundation. The Sue Counts Family and Community Development Endowment is reaching the half-way mark toward full endowment status. Once that is reached, local projects in line with her legacy will get a boost of support. We miss Sue and wish her the best!

The process for finding another County Extension Director is a thorough process. Applications are submitted to the Personnel Office of NC State University. Applicants must meet certain criteria in order to be accepted. Selected eligible applicants are then invited to give a 20-minute presentation to the interview team. The team consists of Extension administration at the district and state levels. The staff and five or six local advisory council members and a county government representative are invited to sit in on the presentations. Input is accepted from these stakeholders, but the final decision rests with the Extension administration. The selected applicant must also face background and reference checks. The selected finalist will then be submitted to the county government for final approval. Needless to say, this process can take some time. We hope that a new County Extension Director will be placed within a few months.

COUNTY EXTENSION DIRECTOR UPDATE

The Farm-City Banquet has been an institution in Watauga County for 53 years. Watauga County’s annual event, which celebrates the ties between the towns and rural areas of the county and fosters communication between farm and non-farm people, is a model for other counties. However, the Farm-City Planning Committee has decided to do something different for the 54th year. We are looking at implementing a new venue, which would include educational exhibits, animals, and fun activities outdoors. A proposed theme for the celebration is youth and agriculture. The awards ceremony and dinner would continue but be more of a “pig pickin’” atmosphere. This, of course, would mean we would need to move to a different time of year. The target date is the afternoon of Saturday, August 15. For those who would like to assist in planning the event, we would welcome your input and have room for more committee members. Contact the Extension office for more details.

farm-city-banquet-update

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AGRICULTURE, NATURAL RESOURCES & ENVIRONMENT

Multipurpose Landscapes

Spring is a time many of us begin to think about adding plants to our landscape and garden. Before you let spring fever overtake you, take some time to think about maximizing the potential of your plantings. Gardens can do so much more than provide beauty and food for humans. There are additional benefits that gardens and individual plants supply to important insect species.

Honeybees are directly responsible for the availability of some of our most beloved and common foods, including apples, blueberries, cherries, watermelon and squash. We can return the favor through our vegetable gardens and landscapes by planting plants that are important food sources for honeybees. The good news is that many of these plants are also gorgeous in the landscape. Plants like hyssop, white clover, buckwheat, asters, and sunflowers all attract bees and supply them with needed pollen and nectar. And there’s no need to worry about being inundated by swarms of hungry bees! Honeybees are much more interested in collecting nectar and pollen than messing with you. As long as you’re not behaving like an irritated human when you’re around bees, you’re not likely to face an irritated bee.

Many gardeners end up sharing their homegrown vegetables with aphids, spider mites, and other uninvited guests. To help minimize damage to your garden, it is in your best interest to attract beneficial insects that eat pesky bugs. Green and brown lacewings, syrphid flies, and lady beetles all can earn their keep in your garden. Plants like Queen Anne’s lace, yarrow, butterfly weed, daisy, parsley, spearpoint, dill, goldenrod and alfalfa all help to draw in these helpful insects. Many culinary herbs are also important to beneficial insects in the garden and are aesthetically desirable in even the most manicured of gardens.

Butterflies are also important pollinators that your landscape can attract. Plants such as parsley and milkweed are important host plants for swallowtails and monarchs. Important nectar plants include sunflowers, bee balm, coneflowers, goldenrod, ironweed, Joe Pye weed, and zinnias.

To further increase the appeal of your landscape to beneficial insects, also try to create a windbreak to reduce dehydration threats from strong winds, and leave permanent pathways and mulched beds as “refuge areas” where beneficials can escape to during cultivation or spraying. Most importantly, remember that pesticides are the most damaging threat to beneficial insects and pollinators. Always be certain that you have correctly identified a pest problem before you begin to treat that problem. If a pest must be controlled, take appropriate steps to ensure that the most effective, least toxic product is used.

More information on supporting pollinators can be found at: www.fws.gov/Pollinators/ www.pollinator.org/ or www.drmcbug.com

HOUSEHOLD HAZARDOUS WASTE COLLECTION

Watauga Cooperative Extension, in partnership with the Watauga County Landfill and the NC Department of Agriculture, is holding a Household Hazardous Waste Collection at the Watauga County Landfill on Saturday, May 23 from 9 a.m. to 2 p.m. Household Hazardous Waste Collections happen twice annually, once in the spring and again in the fall. Improperly disposed household hazardous waste can pollute landfills, streams and groundwater. Items collected include: pesticides, cleaners, paint, batteries, art and craft supplies, and othersolvents. Please make sure that containers are labeled to ensure proper disposal. Formore information, please contact the Cooperative Extension at 828-264-3061.

Report to the People

The Report to the People is an annual event at the Watauga County Cooperative Extension office in which the staff shares its accomplishments with stakeholders. The luncheon provides the opportunity to share some of the many services that the Extension office brings to the community. The event is normally scheduled for the first Monday in March but was snowed out this year. The re-schedule date is Monday, April 20.

Farm-City Banquet Update

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**Seasonal Scouting for Tree Farmers**

Springtime is a busy time for Watauga County tree farmers. After planting young transplants into the field, applying soil amendments, and seeding clover or maintaining existing groundcovers, there comes the chore of scouting. Insect scouting is a critical element of efficient and successful tree production. In the spring, the most common insect to scout for is the Balsam Twig Aphid. This is a native pest species that feeds on young Fraser fir needles, causing needle curl. Balsam twig aphids are soft-bodied, light-green colored insects. The twig aphid can reproduce rapidly, and any cones in the trees will serve as a protected hiding spot during a spray event. Curiously, the twig aphid’s damage is most evident when the needles have fully elongated. At this point, even if aphids are still present on the tree, no additional damage is being caused, due to the hardening of growth and accumulation of waxy cuticle. At this point, there is little to be done aside from making plans to control next year’s population.

The Hemlock Rust Mite can also linger on tree farms in the early spring. The rust mite feeds on Fraser fir and hemlock trees, causing a bronzing of the needles that affects the aesthetics of a tree. Under heavy rust mite feeding, needles can also occur. Rust mites are very small and orange-colored. A scouting hand lens is an important tool to use when looking for rust mites. They can withstand erratic spring weather, surviving cold snaps and freezing temperatures. However, they begin to decline as the spring warms up, completely disappearing through the summer and returning in the fall as temperatures cool.

Just as the rust mite declines, spruce spider mites begin their initial buildup. Spruce spider mites are very small, reddish mites that lay round, bright red eggs. In heavy numbers, spider mites can actually form webs among the tree needles they’re feeding upon. Damage from spider mites results in yellowing of the needle, most obvious at the base of the needles. Widespread spider mite feeding can reduce needle retention and cause premature needleshed. Spider mites prefer hot and dry conditions. During rainy spells or high humidity, there is a natural-borne fungus that attacks spider mites and, in favorable conditions, can cause a spider mite population to crash.

You can also find many other familiar insects in tree fields: lady beetles, lacewings, hoverflies, and parasitic wasps all can be found in well-managed tree farms. These are all examples of beneficial insects that help to naturally control insects causing damage to Christmas trees. In many cases, scouting uncovers a healthy population of beneficial insects that can actually prevent the need to apply a pesticide product. This results in reduced expenses and time savings to the farmer, while also ensuring that continued populations of beneficial insects can keep on doing their job.

For specific information on control options for Balsam twig aphid, Hemlock rust mite, and spruce spider mite, contact the Watauga Extension Center at 264-3061 or visit www.ces.ncsu.edu/fletcher/programs/xmas/production-east/index.html.

The Watauga Cooperative Extension office also provides scouting assistance to Watauga County tree farmers.

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**Beginning Gardening Workshop for Youth and Families**

Thinking about starting a garden but have a black thumb? Want to encourage an interest in gardening with your children? Kids sessions on how to start a garden will be offered along with the Beginning Gardening Class Series. These workshops are designed to interest kids in gardening but will offer some basic information for beginning parent gardeners as well. The workshops are targeted for 5-12 year olds. We will offer some hands-on activities, some fun instruction, and support. We will offer lots of ideas on neat things you can do at home with plants. Initial Dates are: Monday, April 20, 6-7:30 p.m., “Intro to Gardening for Your Plants”

The workshops are slated to meet at the Agricultural Conference Center, but please call to get on the registration list in case the location changes. More workshops will be scheduled during the summer after consulting with attendees.

**Growing Garden Skills**

Across the nation, there is a new wave of interest in growing vegetable gardens. With food prices escalating, many families see growing their own garden not only as a means of saving money, but also a way to reconnect with the natural world.

The Watauga Cooperative Extension Center will be offering free beginning gardening classes in the month of April to help people get started in growing vegetables. The workshops will be held at the Watauga County Agricultural Conference Center in Boone, located at 252 Poplar Grove Road. Workshops will be held on Mondays, from 6-8 PM, on April 13, 20, and 27. The workshops will be taught by Watauga Extension Agents, Richard Boylan and Meghan Baker.

The first workshop will focus on the basics: assessing garden spots for suitability, soil preparation and fertility, and starting seeds. The second workshop will address the common problems in the garden: weeds, insects and disease and offer environmentally-responsible solutions to these problems. The last workshop will cover proper harvesting intervals, succession plantings to keep your garden productive, and cover cropping to protect and improve soil quality.

The Growing Garden Skills workshop series is free, but you will need to call the Watauga Cooperative Extension Center to register, 264-3061.

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**Organic Gardening 101**

This class is designed for beginning gardeners or those who would like to switch to organic methods. Topics include garden planning, seed starting, companion planting, how to attract beneficial bugs, pest management, soil tests and amendments, composting and vermi-composting, growing herbs, landscape planning and edible landscaping. Classes will be held Monday, June 8 through Thursday, June 11 from 9 a.m. until 12:30 p.m. at the ASU Sustainable Development Farm in Valle Crucis. Cost is $20 for all four days. Reserve your spot by paying in advance at NC Cooperative Extension, 971 West King Street in Boone. For more information call 264-3061.

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**N.C. Christmas Tree Extension Program Honored for “Pulling Together” for Growers**

The Western NC Christmas Tree IPM Program recently received a regional award for excellence in integrated pest management. The North Carolina State University-based team received a Friends of IPM “Pulling Together” award from the Southern Region IPM Center. The award recognized the team’s success in assisting Christmas tree growers implement pest management that is effective yet minimal in pesticide use.
Land Activities Affect Streams

Spring has sprung, and with it, a return to ramped-up outdoor activities.

Whether you’re planting a garden, washing a car, fertilizing a lawn, walking the dog, putting in a new deck or numerous other activities, it is important to always keep in mind that what people do on the land affects the health of streams. Land and water are connected through the shape of the land, which creates watersheds or drainage basins. Wherever you are on the land, that spot drains to some waterway downhill.

Best management practices for all walks of life involve making sure that whatever people do on the land is done in a way that will have the least impact on the environment.

There are lots of examples for spring endeavors:

• Red alert to all students and club advisors: If planning a car wash for a fundraiser, please have it on a grassy field, not on a paved parking lot. On the paved lot, all the dirty, soapy water runs off that impervious surface into the nearest storm drain and goes directly to the nearest stream or creek, with no filtering or treatment. Washing cars on grass provides a permeable area for the runoff to filter down through the soil, removing any pollutants before draining slowly to a stream or to groundwater.

• Calling all pet-owners: Pet waste is usually considered an urban problem, and, obviously, we want to scoop up after pets on sidewalks, parking lots or other impervious areas. But even in gardens, parks, lawns and wooded areas, pet waste usually gets washed away by the rain before it has a chance to really break down into the soil. This means that it is getting washed into a stream. This puts pathogens in the water, making it more risky to wade or have contact with the water. So, no matter where you are, please scoop up after your pet.

• Nutrients also enter streams from excessive fertilizing nearby. This can happen in several ways. First, if more fertilizer is applied to a lawn or garden than can be incorporated into the soil or used by the plants, the excess product simply washes away with the rain. Second, fertilizer can inadvertently land on driveways, sidewalks and other non-landscape areas. The product sits on the surface until it is washed away by the next rain. Either way, that fertilizer-rich runoff goes down a storm drain or drainage ditch and eventually ends up in the nearest stream.

The solutions are simple. Sweep any fertilizer that lands on the driveway or sidewalk back onto the lawn. Check the label on the fertilizer, and measure carefully so only the amount truly needed is applied.

• Erosion and run-off from construction sites: A prime contributor of sediment to local streams. State law requires that sediment control measures be used on any land disturbance site of any size, although only proposed projects on sites of one acre or larger must be reported to the Department of Environment and Natural Resources. If planning a do-it-yourself construction project, contact DENR’s Land Quality Section.

Written by Diane Silver, NC Extension Agent

What Are Those Bugs in My Creek?

If you like fishing, you may recognize some of these names: mayflies, stoneflies, caddisflies, dragonflies and dobsonflies. Did you know that these critters -- the flies you may have seen around your creek or stream -- are needed for the ecosystem? Most of these flies begin their life cycles in the stream and are food for fish.

As a group they are called benthic macroinvertebrates. Benthic refers to living on the bottom of a waterbody, macro means large enough to see with the naked eye, and invertebrate refers to animals without backbones. Not all benthic macroinvertebrates are insects; some other types of macroinvertebrates are mussels, clams, snails, crayfish, bloodworms and leeches.

Macroinvertebrates are an important part of the stream environment. When a leaf falls into a stream, it begins to decompose. Most of the nutrients in the leaf are dissolved (leached) within the first few hours. Over the next few days, fungi and bacteria colonize the leaf. Several types of macroinvertebrates consume bite-sized chunks and digest the fungi and bacteria off the outside of the leaf. The leaf is broken into smaller pieces as it passes through the guts of these organisms and is released as feces into the stream. The feces break apart and the tiny leaf fragments are re-colonized by more bacteria and fungi, which become food for another group of invertebrates that have special adaptations to strain food fragments from the water. The leaves continue to be broken down in this way as they are carried downstream with the stream current. Although the process is the same, the particular rate of leaf decomposition in streams varies greatly among species of leaves. Nutrients provided by streamside vegetation are important for stimulating the aquatic food web and overall productivity of a stream. It is, therefore, important to protect vegetated areas along the banks in order to maintain stream health.

Young mussels often hitch rides on certain fishes, causing the fish to produce antibodies, which later help the fish fight more serious infections. Mussels filter the water for food while removing organic particles and pollutants at the same time, helping to clean and clarify streams. This, in turn, keeps streams healthy for both humans and wildlife. Mussels are also a food source to many animals. Their shells provide cover for aquatic insects, crayfish and fish, and they are good indicators of a stream’s condition. Unfortunately, mussels are one of the most vulnerable groups of animals to pollution.

North Carolina is home to more than 60 species of freshwater mussels; however, 50% of these species are designated Endangered, Threatened, or Special Concern within the state. Each we lose not only benefits we have off the of macroinvertebrates is one of the best ways to assess pollution in streams and rivers. Each species has unique characteristics regarding habitat requirements, life history, behavior, and pollution tolerance.

Macroinvertebrates are easy to collect and identify using inexpensive equipment and simple identification keys making the method safe, fun and cost-effective. Macroinvertebrates are very abundant in healthy streams and may practically cover the bottom. Often it is possible to collect hundreds of individuals in just a few minutes, making them ideal organisms for assessing environmental conditions. Hundreds or even thousands of them can live within one square meter of substrate. Many may be seen just by looking on or under stones, sticks and leaves in the stream. Benthic macroinvertebrates spend most of their lives in the same general stream location and are exposed to the water quality conditions at that location over a long period of time. They generally do not relocate even when conditions are poor.

Macroinvertebrates make good pollution monitors because some groups are very sensitive (pollution intolerant groups) to water quality changes. They are like “minimizers,” monitoring water quality at their “home locations” 24 hours per day, seven days per week . . . every week. Some can survive in very clean and stable streams while others survive well in polluted, disturbed habitats.

Did you know . . .

Dragonflies as adults are not only colorful, but they feed on small flying insects such as mosquitoes and gnats. Immature dragonflies (naiads) eat other macroinvertebrates including mayfly naiads, small crustaceans, annelids, and mollusks. Some of the large dragonfly naiads will even attack small fish and tadpoles. These critters, also known as “butter breathers,” have gills inside of their abdomen and breathe by pulling water into their abdomen through their rear end where they absorb the oxygen they need. When they expel this water (as if they were exhaling a breath of air), they are able to launch themselves through the water using a type of jet propulsion. Think of them as the original Jet Ski!

Adult caddisflies hold their wings over their backs like a tent and look much like moths. They are a source of food for many fish and waterfowl. Caddisflies spend most of their lives as larvae and are only adult long enough to reproduce. Larval caddisflies resemble caterpillars but are completely aquatic. Some are case makers, some build nets when submerged, and some are free-living. Case makers spin silk to cement together sand, stream gravel, tiny sticks, or plant debris. Each species uses a different material or size to construct a home. They feed on plants. Net-making larvae spend most of their time near underwater silk nets and feed off materials that are trapped in the nets. The free-living larvae are predaceous.

Written by Wendi Hartup, NC Extension Agent
Managing the Spring Pasture Growth

If you think back to last year’s grazing season, it is difficult to start thinking about extra or too much grass. However, as the grass begins to show green, you know it won’t be long until grazing season and hopefully an abundance of grass. Managing this abundance of lush pasture growth is critical to sustaining grazing throughout summer and into fall. Many people do not think that pastures need much management when there is an “excess” of grass, but this is the time to start.

The main types of pasture grasses utilized in this area are cool season grasses. These grasses include fescue, orchard grass, timothy, bluegrass and perennial ryegrass. These types of pasture grass usually reach their peak in mid- to late-spring (May-June). This time of year often finds farmers too busy with other chores to properly manage their pastures.

There are several things that you can do to better utilize this forage and help you save money. The first thing you should do is to analyze your needs and develop a sound grazing management plan to follow. A grazing plan does not need to be complex or necessarily change a lot of things you may already be doing. This is a guide to help you decrease loss of resources. The amount of forage actually consumed during a growing season with continuous grazing is about 35% of what is actually produced. However, by utilizing a rotational system with a one- to three-day rotation, over 70% of the growth is consumed.

I find that a lot of livestock producers allow the livestock to manage the forages. Livestock manage the spring flush by selecting the highest quality, the most palatable forages first and concentrating their grazing in those areas. This type of grazing is detrimental to a stand’s potential and increases weed pressure. Many times the spring forages are allowed to mature, and then the mature grass needs to be mowed. This results in wasted forage and the loss of potential income.

When you start a grazing management plan, you need to determine when to turn out on grass. If you have not recorded this date in the past, then this year is the start. One of the most common errors made is turning animals out too late. If you wait until you have plenty of grass in the first paddock to feed the herd, then you are too late. By waiting, the other paddocks will become mature and overgrown. If you are practicing rotational grazing, start your rotation earlier and provide supplemental hay until you can graze permanently. Remember, you can start rotational grazing by dividing one pasture in half.

One option producers have is to stock more heavily in the spring. To avoid overstocking later, you may want to retain some steer calves to graze as yearlings and then sell after pasture growth declines. You shouldn’t make the mistake of overstocking anytime but especially during the summer slump or in a drought.

Harvesting hay can be a good option. If you would like to harvest more hay, then start grazing paddocks that are steep or where you cannot mow hay. This allows for an early cutting of hay off some pastures and the opportunity to graze later in the season when pasture growth declines.

Fertilization is another area that can cause problems for cattle producers. One mistake that is often made is the application of nitrogen fertilizer in early spring. This application of nitrogen adds to the problem of quick, lush, spring growth and can actually make more grazing than needed. Nitrogen fertilization also inhibits the growth of nitrogen fixing legumes (clovers). These legumes are important to pastures and are very expensive to establish. The only forages that really need nitrogen fertilization in the spring are the paddocks that will be cut for hay or pure grass stands.

The management of your grazing and hay ground has the potential to increase the quality of livestock by providing more and higher quality forages. As the price of feed and fertilizer increases, the improvements you make in your grazing will have a direct effect on the bottom line.

PREVENTION TIP: Preventing Grass Tetany in Cattle

The warm weather that we have been experiencing over the last couple of weeks adds to the excitement of spring in the air. There are new calves, lambs and kids that enjoy the bright sun and fresh air. There are flowers blooming and the trees are starting to bud. The biggest difference that you may notice is the brilliant green color of the grass. While this definitely signals spring, it also brings some concerns for cattle producers.

Grass Tetany is often a fatal metabolic disorder in beef and dairy cows on pasture. The main danger of grass tetany is to lactating cows within 60 days after calving. To put grass tetany in simple terms, it is the cow’s inability to get enough magnesium from the forages to meet high demands. The best approach to combat grass tetany is to prevent it from happening.

The best preventative measure is to provide magnesium free choice to cows, especially lactating cows. The average cow needs to consume one ounce of magnesium oxide per day. Magnesium oxide does not taste good to cows, and they will avoid eating mineral supplements if other options are provided, so be sure to remove any other sources of salt. The main symptoms of grass tetany begin with the lack of coordination, and generally the cow is found down and unable to get up. They may also become belligerent and attack objects or people. It often ends with convulsions, coma and death. The producer may find animals, on pasture dead, without any signs of illness. There are often signs of thrashing around the cow if grass tetany is the cause of death.

Cattle suspected of having mild symptoms can have a blood test to verify diagnosis. However, the act of getting the cow up and put into the chute can trigger more life-threatening symptoms. Treatment of grass tetany is intravenous solution of magnesium calcium. Most treatments should be done by or on the advice of your veterinarian. The earlier the animal receives treatment, the more likely it is to make a full recovery. Not all animals that receive treatment will recover.

Prices of commercial mineral mixes have soared over the past several years, but that is no excuse. You can make your own mineral mix and save money in the process. One proven mix is 100 lbs. of salt, 100 lbs. dicalcium phosphate, 100 lbs. magnesium oxide and 25 lbs. of dry molasses. Plain white salt or trace mineral salt can be used and are equally effective. These ingredients can be found at most farm supply stores and may seem expensive on their own but will be cheaper than commercial high magnesium mixes. One other simple mix is 1 part magnesium oxide to one part molasses, provided free choice.

The magnesium can also be mixed with grain or a protein supplement. Remember to allow enough bunk space when feeding so that all of the cows have access to feed and the magnesium they need. If bunk space is not sufficient, then smaller, weaker, less aggressive cows may not receive the supplementation they need. The main goal is for each animal to consume 1 to 2 ounces of magnesium oxide per day.

One way to enhance the prevention of grass tetany is to avoid the conditions that cause or add to the susceptibility of the cattle herd. Utilize fast-growing pastures or cover crops by grazing less-susceptible animals first. Steers, heifers, dry cows and cows with calves over four months of age are less likely to develop grass tetany. You can apply dolomitic or high magnesium lime on pastures. Adding legumes to your pastures not only adds nitrogen but can also reduce the incidence of grass tetany.

Management is the first and most effective step in the prevention of grass tetany. You should provide a good mineral mix to provide sufficient magnesium to cows that are susceptible. Grazing plans can be implemented to lessen the risk to susceptible animals, graze small grains and fast-growing pastures by animals that are at less risk. The incidence of grass tetany can be reduced by good management, resulting in a decrease of losses associated with grass tetany.

The statement “an ounce of prevention is worth a pound of cure” certainly holds true for Grass Tetany.

**PREVENTION TIP:**

The statement “an ounce of prevention is worth a pound of cure” certainly holds true for Grass Tetany.

**Taking Charge of Your Diabetes**

If you have diabetes, you don’t want to miss this workshop! Monday, June 22 - Thursday, June 25, 9 a.m. until 1 p.m. each day. You'll learn how to better control your blood sugar to delay or avoid health problems related to diabetes. Speakers include a physician, pharmacist, physical therapist, certified diabetes educators and nutritionists. A cooking show and lunch are included each day. The charge is $35 for the entire week, and scholarships are available. Pre-registration is required. For more information, call NC Cooperative Extension at 264-3061. Make checks payable to NCCES and mail to 971 West King Street, Boone, NC 28607.

FAMILY & CONSUMER SCIENCES
Healthy Eating on a Budget

Eating smart helps maintain good health. In tough economic times, however, you may be wondering, “How can I afford to eat healthy and still feed my family?” There are many cost-saving strategies that will help you eat wisely and stay within your food budget.

Before shopping - make a plan

- Take a few minutes to plan meals for the week. Make a list of both main and side dishes.
- Check store flyers each week and incorporate foods that are on sale into your menu.
- Make a shopping list based on your weekly menu. Stick to the list.
- Use food coupons only for food that is a good buy and that you will use. Organize your coupons before shopping. Make sure that the coupon price is cheaper than alternatives. Shop at stores offering double or triple coupon values. Stock up when you discover good deals.
- Combine coupons with sale items. Join a coupon swapping organization in your area, or start your own swap at your workplace or child’s school.

Get the best deal

- Download coupons online for frequently purchased items. There are several online sources. Check circulars from several stores. These are typically inserted into the Sunday or Wednesday newspaper or may be found at the front of the store. To get the best buys, shop at more than one store but keep an eye on your gas bill.
- Look for coupons on food packaging, in grocery store aisles, on grocery receipts, in magazines, and on the Internet. Coupon Cart (www.couponcart.com) and Coolsavings (www.coolsavings.com) offer lots of coupons, although you must register to access them. Hot Coupons (www.hotcoupons.com) and Valpak (www.valpak.com) offer coupons without registration.
- Use store loyalty cards to take advantage of special offers.

Practice money-saving strategies

- Shop once a week or less often. You will save money (and time) by avoiding temptation and impulse purchases.
- Use unit pricing to make sure you get the best buy. Bring a calculator to the store if necessary.
- Find the lowest-cost package size. Biggest is not always the best buy. Individual-size containers can be twice as expensive.
- Find the brand that costs less. Generic or store brands are often (but not always) lower in price.
- Compare prices for different product forms, such as fresh, frozen, and canned items, as well as the cost of individual pieces of prepackaged food like bagels, muffins, or rolls.
- Purchase what you need based on the cost per serving.
- Purchase fruits and vegetables that are in season. When fresh produce is too expensive, purchase canned or frozen fruits and vegetables. Buy canned and frozen fruits and vegetables with no added sugar or sauce.
- Avoid the junk and snack food aisles. Items like chips, soda, and snack foods are expensive. Your food dollar is better spent on more nutritious options such as fruit, nuts, cheese, or whole-grain crackers.
- Compare prices of store and generic brands. If quality is similar, purchase the cheapest brand.
- Check the price of bagged produce such as apples, oranges, potatoes, or onions. They may be cheaper than buying single items. Make sure you plan your menu to use all that you buy.
- Purchase large portions of meats-whole chickens, large bags of chicken parts, and family packs. Divide into smaller containers and freeze.
- Replace some of the meat in your diet with alternative protein sources such as beans. When you do serve meat, serve smaller portions or make dishes such as stir-fry or casseroles that use less meat.
- Oatmeal makes a healthy and filling breakfast that is much less expensive than cold, ready-to-eat cereals. Make it with milk instead of water for added protein and calcium. Purchase plain oatmeal (quick cooking or old fashioned) instead of single-serving, flavored oatmeal.
- Buy non-food items (medicine, cleaning, and hygiene products) at a discount store.

Shop at the right time for the best deals

- Shop for baked goods early in the day. The bakeries mark down yesterday’s items. Freeze part of the bread if you will not use it within the next few days.
- Shop for meat later in the day. The meat department marks down items about to go past the “sell by” date. Use the same day or freeze immediately.
- Don’t shop when you’re hungry or tired -- you’re more likely to make impulse purchases.
- Don’t shop without a plan. This means staying within your food budget.
- Find the lowest-cost package size. Biggest is not always the best buy. Individual-size containers can be twice as expensive.
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Dried Bean Basics:

- Dried beans can be stored for six months to one year.
- If you buy dried beans in bulk, store in an airtight bag or container.
- Dried beans can be stored for six months to one year.
- Rinse the beans and remove stones or shriveled and discolored beans before using.

Soaking Dried Beans:

Overnight method: Put beans in a large pot and fill with enough cold tap water to cover them by three inches. Soak beans overnight, 8 to 12 hours. The next morning, drain the beans. You can keep the beans in the refrigerator until you’re ready to use them.

What’s In Season?

Green leafy vegetables are nutrition superstars, chock full of vitamins and other important nutrients. Romaine, leaf lettuce, butterhead, and mesclun are delicious in salads. Enjoy spinach either raw or cooked. Other greens, such as kale, collards, Swiss chard, and bok choy, require cooking. These greens are inexpensive and delicious. You can prepare them quickly and healthfully by sautéing or braising.

- Choose deep-colored greens without yellow or black spots and without signs of wilting.
- Greens will cook down, so use plenty. In general, a pound and a half of raw greens will feed four people.
- Raw greens will keep in the refrigerator for one week and sometimes up to two, but the fresher the better.
- Cooked greens can be refrigerated for up to four days and then reheated.

Preparing

- Cut away the leaves from the stems. For many greens, you can chop the stems and cook them first, then add leaves that have been chopped or cut into narrow strips.
- Wash the leaves and stems well. Drain or dry in a salad spinner.
- Add chopped onions & garlic for great flavor.

FOCUS ON BEANS

Using less expensive high-protein foods such as beans may be new to you, but with a little know-how and planning, you can save a lot of money. A half-cup serving of beans has plenty of protein (7 grams) and about a quarter of the fiber you need each day. Canned beans offer a quick alternative to dried beans. However, dried beans are considerably cheaper and not difficult to prepare once you get the hang of it.

Dried Bean Basics:

- Dry beans expand to about 2 1/2 times their original size when soaked.
- One pound of dry beans equals about 2 cups dry, or 5 to 6 cups cooked.
- Dried beans should be stored in a cool, dry place, preferably in their plastic package.
- If you buy dried beans in bulk, store in an airtight bag or container.
- Dried beans can be stored for six months to one year.

Cooking Dried Beans:

- Cooking beans with tomatoes, vinegar, or lemon juice (anything acidic) will increase the cooking time. Try adding such ingredients toward the end of the cooking time.
- Cook beans in water or low-sodium stock or broth.
- Cook the beans and add vegetables and flavorings for a one-pot soup or stew, or you can drain cooked beans and use in salads or other dishes.

Cooking times:

- Baby Lima Beans: 1 hour
- Black-eyed Peas: 3/4 to 1 hour
- Dark Red Kidneys: 1 to 1 1/2 hours
- Garbanzos (chickpeas): 1 to 1 1/2 hours
- Large Limas: 3/4 to 1 hour
- Light Red Kidneys: 1 to 1 1/2 hours
- Pink Beans: 1 to 1 1/2 hours
- Small Whites: 1 to 1 1/2 hours
Telling the Kids: We Need to Spend Less!

How is the financial crisis affecting your family? Some children may feel anxious or depressed. The key is how parents respond. If parents are irritable and in constant conflict over money matters, it is more likely that children will be negatively affected.

The job loss or the loss of income can and will stress you as an adult, but you will be adding an extra layer of stress if matters are not handled correctly within the family.

INOLVE THE CHILDREN TO THE EXTENT THEY CAN MANAGE THE INFORMATION

1. Tell the children enough to help them understand your stress and the budgetary reality. You might say, “I am a little worried right now about work and making money. I wanted you to know what’s going on. The main thing to remember is we (I) love you and I am working on a plan, but I will have to say NO to many things that cost money. I hope you can understand. It’s hard but we can do this together!”

2. Keep the communication door open. Kids talk with other kids, and they may hear rumors. Invite children to ask you whatever they want, and say that you will try to answer them truthfully. Let your kids know that many families are feeling the money crunch. They are not alone.

USE THIS AS A TEACHABLE MOMENT ABOUT BUDGETS AND MONEY MANAGEMENT

3. This is really a teachable moment when it comes to understanding budgets. Invite adolescents and teens to sit with you while you write out checks and make payments to see your balance reduce. Let them use the calculator. Call it a budget or spending plan, involve them in making a list of what is NEEDED during the month, and help them research the costs for each item. Help them see how buying at a second-hand, co-op store, or at a yard sale can bring a bargain on some needed items.

SPEND MORE TIME TOGETHER AS A FAMILY

4. Admit that you are stressed, and spend more time with the family doing just family things. Parents may find this a nice escape to ride bikes, take a walk, play cards, a board game or make a batch of biscuits together.

PLAN AND STICK TO A ROUTINE

5. As always, stick to a routine. An expected and calm bedtime routine is a great parenting practice and can be soothing and calming for parent and child. Planning bath time, limiting television, giving a back rub, and reading a book are all activities that bring parent and child closer together.

PRAISE CHILDREN FOR COST-SAVING PRACTICES

6. Pay close attention to your child’s moods. Offer hope and convey that they are safe and you have a plan. Praise them for contributing to the family savings and going without some things they thought they needed.

7. Think of ways that kids can be part of the solution for the family. Ask them for cost-saving ideas. Talk about turning out the lights and saving energy.

TAKE CARE OF YOURSELF SO YOU CAN TAKE CARE OF THEM

8. Take care of yourself. Find some quiet relaxation time. Find time to think, plan, and job hunt. Network and ask all of the people you know for job leads and to compare tips for cost cutting.

What other ideas might you have? Have you thought about coupon clipping, washing only full loads of clothes, cleaning and replacing your furnace filters, cooking a large casserole and a stew on Sunday then stretching those meals out all week long? What else?

Share Your 4-H Photographs and Momentos

4-H Green and Growing Archive

The Special Collections at NC State is gathering photographs for a digital and traveling exhibits. You can see the photos already collected at www.lib.ncsu.edu/specialcollections/greenngrowing/. Why not add your own to the collection? The Extension office can help you submit photos. A scanned version is acceptable.

4-H POSTAGE STAMP RELEASED

Sending old-fashioned mail is exciting again with the availability of this 4-H’er-designed postage stamp. You can get an order form on-line or ask at the 4-H office.

Youth and Plants - A Wonderful Combination

Here are some ways that young people benefit from gardening projects:

- To cultivate a respect for living things
- A great way to encourage experiential, hands-on learning, and curiosity
- Increase interest in nature and promote agricultural literacy
- Increase interest in vegetables and fruits
- To increase lifeskills such as: decision making, goal setting, interpersonal skills, self-understanding, teamwork, responsibility
- Increase science skills and critical thinking
- Increase positive attitudes toward science
- Increase outdoor and family time
### CALENDAR of EVENTS

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<th>MAY</th>
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#### 4-H Camp Registration Still Open

Get ready now for 4-H Camp for Summer 2009. Watauga County 4-H will escort a group of 8-14 year-old campers to Betsy-Jeff Penn 4-H Center. The center is located above Greensboro in Rockingham County, near Reidsville. The camping week is June 28-July 3. You can reserve your spot with a $100 deposit and have until July to save up $240 for the rest of the fee, which totals $340. The fee covers meals, lodging, t-shirt, transportation to camp, and more. Contact the 4-H office at 264-3061 for more information or to register. For more about Betsy-Jeff Penn 4-H Center and other 4-H camping opportunities, check the website out at www.nc4h.org/centers.

#### We Invite You To Participate In The Celebration

**North Carolina’s 4-H Centennial Cookbook - 100 Years of Blue Ribbon Recipes**

Remember those blue ribbon entries in the county or state fairs, your foods demonstration, the outdoor cookery or grilling category, the display you prepared for the Favorite Foods Show, the biscuit bake-off, and/or the foods you canned, froze or dried? With the celebration of the North Carolina 4-H Centennial, we have an opportunity to retrieve those memories and submit our “blue ribbon” recipes.

This centennial project is more than a cookbook ... with every recipe that is accepted, the contributor is requested to tell his/her blue ribbon 4-H story. To quote Mr. L. R. Harrill, North Carolina’s First State Leader, “4-H is about the business of growing blue ribbon boys and girls.” Please share those blue ribbon recipes and stories!